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10/762,038	01/20/2004	Junichi Hayashi	CFA00043US	3926

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Canon U.S.A. Inc.
Intellectual Property Department
15975 Alton Parkway
Irvine, CA 92618-3731

EXAMINER

WANG, JIN CHENG

ART UNIT	PAPER NUMBER
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2628

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,038

Applicant(s)

HAYASHI, JUNICHI

Examiner

Jin-Cheng Wang

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/9/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54-56 and 63-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 54-56 and 63-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's submission filed on October 9, 2006 has been entered. Claims 1-48 have been canceled. Claims 54 and 63 have been amended. Claims 67-70 have been newly added. Claims 54-56 and 63-70 are pending in the present application.

Response to Arguments

Applicant's arguments filed October 9, 2006 have been fully considered but are moot in view of the new ground(s) of rejection set forth in the this Office Action.

As addressed below, the Claim 54 is rejected as being anticipated by Matsunoshita US 2003/0179412 A1 (hereinafter Matsunoshita) in view of Shimada et al. U.S. Patent Publication No. 2004/0021311 (hereinafter Shimada).

Matsunoshita teaches an image-processing apparatus comprising:

Inputting means (*e.g.*, Paragraph 0050) for inputting area-assignment information that defines a latent-image area and a background area (*e.g.*, Paragraph 0065 and 0075 for the inputting means and Paragraph 0067 and 0070-0073 for the inputting means for inputting area-assignment information that defines a latent-image area and a background area wherein the coding array is generated within the background image buffer having the area-assignment information that defines a latent-image area and a background area), and additional information (*e.g.*, *The Paragraph 0112 of the cited reference teaches the copying operation controls that permit a specific user to copy for the original document and the background image of*

Art Unit: 2628

Paragraphs 0066-0069 wherein the additional information such as the copy inhibition code array and the copy condition code are arranged over the entire image surface as taught in Paragraph 0112. The copy inhibition code array and copy condition code array thus permit a specific user to copy for each document without the latent image characters "COPY" being added; MOREOVER, the received additional information may be the PDL information of Paragraph 0075 or may be either from the embedded code information in the background image or the additional information retrieved from the internal memory, e.g., the machine number, user ID and password stored in the internal ROM; Paragraphs 0125-0127, or the contents of the condition information with the information registered in the internal memory; Paragraph 0157; based on the additional information received from the internal memory, the control part 32 analyzes the condition information represented by the condition code to permit or inhibit copying of the image; and by the template matching technique of Paragraph 0133 and the judgment is made whether the document image is a copy inhibition document of Paragraph 0149 based on the embedded information in the background image. Permit of copying means the permit of copying of the document image which is an original image to be copied without copy inhibition wherein the copying of the document image is an original image. FINALLY, in Paragraph 0162, 0165; 0066-0069; Matsunoshita teaches additional information being ALSO attached to the latent image area. For example, Matsunoshita discloses in Figs. 5(A)-6(C) the additional information such as the copy inhibition information (Paragraph 0062) is attached to the latent image area wherein the relatively small dots within the latent image characters cannot be faithfully copied by the copying machine (Paragraph 0101) and the large dots outside the latent image are faithfully reproduced. The original document image may be printed. The

Art Unit: 2628

copy inhibition information is attached to the latent image area to distinguish from an original image. See Paragraph 0193-0194 wherein the document data may be printed without the pattern images or without the copy inhibition information. In Paragraph 0200, the copy inhibition code is used to permit the copying of the printed document wherein the printed document serves as "an original document". However, Paragraph 0210-0211 illustrate that the document is printed with the pattern images shown) which is different from any of the latent-image area, the background area and the area-assignment information (See Paragraph 0111 wherein the copy inhibition code array and the condition code array are different from the latent image area, the background area and the area-assignment information as claimed);

Determination means for determining a plurality of positions in the background area which is defined by the area-assignment information and a plurality of positions in the latent-image area which is defined by the area assignment information, wherein at least either positions of the plurality of positions in the background area and the plurality of positions in the latent image area are determined based on the additional information (e.g., *Matsunoshita has taught in Paragraph 0092 that a pattern number array as corresponding to the claim limitation of the area assignment information is generated having the same size as of the whole latent image wherein the values of the elements of the pattern number array are 0s, or 1s on the whole image; in Paragraph 0083, Matsunoshita has taught the pattern number array is such that latent image characters are depicted by the pattern number (e.g., 2s) according to the predetermined rules on the background in which the copy inhibition codes are condition codes are arrayed and in Paragraph 0090, Matsunoshita has taught that the periphery of the rectangular area having given vertical and horizontal sizes is entirely defined by 1s; see Paragraph 0100 wherein*

Art Unit: 2628

Matsunoshita has taught that the pattern images inside the latent image characters are different from those outside the latent image);

Generating means for generating a pattern image data by arranging dots of a first dot size at the determined positions in the background area and arranging dots of a second dot size that is a smaller dot size than the first dot size at the determined positions in the latent image area (e.g., Paragraph 0101; the relatively large dots outside the latent image are faithfully reproduced, but relatively small dots within the latent image characters cannot be faithfully copied by the copying machine; moreover, the document image and the background image containing a number of pattern images may have dots of different sizes; Figs. 3-4, 6(A)-6(B), Paragraph 0005, 0016, 0021, 0027, 0066-0069, 0100, 0101; the background image is generated having a size smaller than the document image; Paragraph 0160);

Wherein the additional information which is different from any of the latent-image area, the background area and the area-assignment information can be extracted (See Paragraph 0076 and 0082-0083 wherein PDL data determines how the latent image is superimposed with the background area and the code array data and pattern number array data determine the positions and directions of the pattern images superimposed together according to the predetermined rules. See Paragraph 0111 wherein the additional information such as the copy inhibition codes are expressed as plural kinds of pattern images are read/detected/extracted with the image reading process; moreover, in Paragraph 0116-0118 and 0129-0131 the copy inhibiting information can be extracted according to the dots or the binary data 0 and 1; see also Paragraph 0162-0163 and 0122-0123; see Paragraph 0117-0118 for the extraction of the additional information such as the copy inhibition information and condition information. See

Art Unit: 2628

Paragraph 0089 wherein the size of the unit two-dimensional array of the condition code array as of the copy inhibition code array is defined by 20 vertical by 20 horizontal) by determining directions (e.g., Paragraph 0082, the cited reference discloses plural kinds of code data such as two dimensionally arrayed in an area of predetermined size to generate a unit two-dimensional array for the copy inhibition code arrays and the unit two-dimensional arrays are repeatedly arrayed in both the vertical and horizontal directions) to which positions of the arranged dots are away from the predetermined positions (e.g., Paragraph 0088).

Matsunoshita clearly teaches that the additional information such as the embedded code information with the contents of the condition information and the copy inhibition code are reconstructed as a background image wherein the background image includes a latent image. Moreover, the background image including the additional information is also attached to the document image in compositing; see Paragraph 0016, 0021, 0027, 0051, 0054, 0066, 0072, 0081, 0083, 0088, 0093, 0099-**0106**, 0109, 0117, 0124-0127, 0132-0133, 0145-0147, 0155-0165, 0198-0204, 0209-0211; See paragraph 0066-0069; Matsunoshita teaches additional information being attached to the latent image area. For example, Matsunoshita discloses in Figs. 5(A)-6(C) the latent image area and the additional information such as the copy inhibition information (Paragraph 0062) is attached to the latent image area wherein the relatively small dots within the latent image characters cannot be faithfully copied by the copying machine (Paragraph 0101) and the large dots outside the latent image are faithfully reproduced. The copy as shown in Figs. 6(B) and 6(C) is legible with characters "COPY". Therefore, the copy inhibition information is

Art Unit: 2628

attached to the latent image area to distinguish an original image from a copy. In the images in Figs. 6(B) and 6(C), "COPY" can be seen by the human eye.

In other words, Matsunoshita clearly shows that additional information is ALSO attached to the latent image area. For example, Matsunoshita discloses in Figs. 5(A)-6(C) the latent image area and the additional information such as the copy inhibition information (Paragraph 0062) is attached to the latent image area wherein the relatively small dots within the latent image characters cannot be faithfully copied by the copying machine in which the character image is snow white not containing characters and graphics (Paragraph 0101) and the large dots outside the latent image are faithfully reproduced. See paragraph 0110 that the characters embedded as a latent image comes forth into view when the document image is copied. See also Paragraph 0160 that the background image is located in a predetermined location of the document image.

The attached information is capable of distinguishing the original document from a copy. The cited reference teaches the composite image having the embedded information is an ORIGINAL image as distinct from the copied one after it is subject to the copying operation. This allows the copy of the original document to be distinguished from the original document. The user is also capable of printing out the original document without attaching the additional information, i.e., the background image to the original document when the user is permitted to print the original document. Moreover, Matsunoshita discloses the copying of the original document is either allowed or prohibited, and if allowed, a copy inhibition mark is attached with the original document in the latent image area together with the background image. See Paragraph 0193-0194 wherein the document data may be printed without the pattern images or without the copy inhibition information. In Paragraph 0200, the copy inhibition code is used to

Art Unit: 2628

permit **the copying of the printed document** wherein the printed document serves as “an original document”. Paragraph 0210-0211 illustrate that the document is printed as a copy with the pattern images shown.

Matsunoshita discloses in Paragraph 0110 that this psychological deterrent acts on the illicit copying act and one can **distinguish between the original and the copied sheet by the emerging image**. *Therefore, Matsunoshita clearly discloses the additional information is capable of distinguishing an original image from a copy as the additional information is attached to the latent image area to distinguish an original image from a copy.* In the image of Fig. 6(B), the copied image is clearly different from the original image-the confidential document.

However, Matsunoshita is silent to the claim limitation wherein the additional information can be extracted based on the difference between the positions of the arranged dots and predetermined positions.

Shimada teaches the claim limitation the claim limitation wherein the additional information can be extracted based on the difference between the positions of the arranged dots and predetermined positions (*See Shimada Paragraph 0101, 0110, 0166*).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have incorporated Shimada’s teaching into Matsunoshita because the printed matter of Matsunoshita can be irradiated with UV rays of Shimada so that the latent image can be visually recognized/extracted. Moreover, Shimada discloses the claim limitation generating means for generating a pattern image by arranging dots of a first dot size in the background area that is defined by the area-assignment information, and based on the additional information,

Art Unit: 2628

arranging dots of a second dot size that is a smaller dot size than the first dot size in the latent-image area that is defined by the area-assignment information (*See Shimada Figs. 1, 4, 7 and 11*).

Matshunoshita at least teaches or suggests the claim limitation of extracting the additional information. See Matshunoshita at Paragraph 0111 wherein the additional information such as the copy inhibition codes are expressed as plural kinds of pattern images are read/detected/**extracted with the image reading process**. Moreover, in Matshunoshita Paragraph 0116-0118 and Matshunoshita Paragraph 0129-0131, the copy inhibiting information can be extracted according to the dots or the binary data 0 and 1. See also Matshunoshita at Paragraph 0162-0163 and 0122-0123; at Paragraph 0117-0118 for the extraction of the additional information such as the copy inhibition information and condition information. See Matshunoshita at Paragraph 0089 wherein the size of the unit two-dimensional array of the condition code array as of the copy inhibition code array is defined by 20 vertical by 20 horizontal.

One of the ordinary skill in that art would have been motivated to have extracted the additional information including the latent-image area according to the arrangement of the dots in the latent image area as the dots of the patent image area is different from the dots in the peripheral area according to Shimada (*Shimada Figs. 1, 4, 7 and 11*) that can be visually recognized with the device of Shimada (*Shimada Paragraph 0101, 0110, 0166*).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2628

Claims 54-56 and 63-70 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

For example, the claim 54 recites the new claim limitation wherein the additional information which is different from any of the latent-image area, the background area and the area-assignment information can be extracted by determining directions to which positions of the arranged dots are away from the predetermined positions. The specification lacks support to the above claim limitation. First of all, whether and how “the arranged dots” as claimed are linked in anyway to the additional information, or the latent image area, or the background area, cannot be determined as claimed. Secondly, whether and how “the predetermined positions” as claimed are linked in anyway to the additional information, or the latent-image area, or the background area. Thirdly, the specification does not describe the claim limitation wherein the additional information as claimed to be different from any of the latent-image area, the background area and the area-assignment information can be extracted by determining directions to which positions of the arranged dots are away from the predetermined positions.

Claims 55-56 and 67-68 depend upon the claim 54 and are rejected due to their dependency on the claim 54.

The claim 63 is subject to the same rationale of rejection set forth in the claim 54.

The claims 64-66 and 69-70 depend upon the claim 63 and are rejected due to their dependency on the claim 63.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The claims 54-56 and 63-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 54 recites the limitation "the arranged dots" and "the predetermined positions" in line 20 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is not clear whether the claim limitation of "the arranged dots" refers to the dots of a first dot size at the determined positions in the background area or dots of a second dot size that is a smaller dot size than the first dot size at the determined positions in the latent-image area, or anything else. Similarly, it cannot be ascertained whether "the predetermined positions" refer to the plurality of positions set forth in the determination means. Clarification is required.

Claims 55-56 and 67-68 depend upon the claim 54 and are rejected due to their dependency on the claim 54.

The claim 63 is subject to the same rationale of rejection set forth in the claim 54.

The claims 64-66 and 69-70 depend upon the claim 63 and are rejected due to their dependency on the claim 63.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 54-56 and 63-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunoshita US 2003/0179412 A1 (hereinafter Matsunoshita) in view of Shimada et al. U.S. Patent Publication No. 2004/0021311 (hereinafter Shimada).

Re Claims 54, 63 and 66:

Matsunoshita teaches an image-processing apparatus comprising:

Inputting means (*e.g., Paragraph 0050*) for inputting area-assignment information that defines a latent-image area and a background area (*e.g., Paragraph 0065 and 0075 for the inputting means and Paragraph 0067 and 0070-0073 for the inputting means for inputting area-assignment information that defines a latent-image area and a background area wherein the coding array is generated within the background image buffer having the area-assignment information that defines a latent-image area and a background area*), and additional information (*e.g., The Paragraph 0112 of the cited reference teaches the copying operation controls that permit a specific user to copy for the original document and the background image of Paragraphs 0066-0069 wherein the additional information such as the copy inhibition code array and the copy condition code are arranged over the entire image surface as taught in*

Art Unit: 2628

Paragraph 0112. The copy inhibition code array and copy condition code array thus permit a specific user to copy for each document without the latent image characters "COPY" being added; MOREOVER, the received additional information may be the PDL information of Paragraph 0075 or may be either from the embedded code information in the background image or the additional information retrieved from the internal memory, e.g., the machine number, user ID and password stored in the internal ROM; Paragraphs 0125-0127, or the contents of the condition information with the information registered in the internal memory; Paragraph 0157; based on the additional information received from the internal memory, the control part 32 analyzes the condition information represented by the condition code to permit or inhibit copying of the image; and by the template matching technique of Paragraph 0133 and the judgment is made whether the document image is a copy inhibition document of Paragraph 0149 based on the embedded information in the background image. Permit of copying means the permit of copying of the document image which is an original image to be copied without copy inhibition wherein the copying of the document image is an original image. FINALLY, in Paragraph 0162, 0165; 0066-0069; Matsunoshita teaches additional information being ALSO attached to the latent image area. For example, Matsunoshita discloses in Figs. 5(A)-6(C) the additional information such as the copy inhibition information (Paragraph 0062) is attached to the latent image area wherein the relatively small dots within the latent image characters cannot be faithfully copied by the copying machine (Paragraph 0101) and the large dots outside the latent image are faithfully reproduced. The original document image may be printed. The copy inhibition information is attached to the latent image area to distinguish from an original image. See Paragraph 0193-0194 wherein the document data may be printed without the

pattern images or without the copy inhibition information. In Paragraph 0200, the copy inhibition code is used to permit the copying of the printed document wherein the printed document serves as "an original document". However, Paragraph 0210-0211 illustrate that the document is printed with the pattern images shown) which is different from any of the latent-image area, the background area and the area-assignment information (See Paragraph 0111 wherein the copy inhibition code array and the condition code array are different from the latent image area, the background area and the area-assignment information as claimed);

Determination means for determining a plurality of positions in the background area which is defined by the area-assignment information and a plurality of positions in the latent-image area which is defined by the area assignment information, wherein at least either positions of the plurality of positions in the background area and the plurality of positions in the latent image area are determined based on the additional information (e.g., Matsunoshita has taught in Paragraph 0092 that a pattern number array as corresponding to the claim limitation of the area assignment information is generated having the same size as of the whole latent image wherein the values of the elements of the pattern number array are 0s, or 1s on the whole image; in Paragraph 0083, Matsunoshita has taught the pattern number array is such that latent image characters are depicted by the pattern number (e.g., 2s) according to the predetermined rules on the background in which the copy inhibition codes are condition codes are arrayed and in Paragraph 0090, Matsunoshita has taught that the periphery of the rectangular area having given vertical and horizontal sizes is entirely defined by 1s; see Paragraph 0100 wherein Matsunoshita has taught that the pattern images inside the latent image characters are different from those outside the latent image);

Art Unit: 2628

Generating means for generating a pattern image data by arranging dots of a first dot size at the determined positions in the background area and arranging dots of a second dot size that is a smaller dot size than the first dot size at the determined positions in the latent image area (e.g., *Paragraph 0101; the relatively large dots outside the latent image are faithfully reproduced, but relatively small dots within the latent image characters cannot be faithfully copied by the copying machine; moreover, the document image and the background image containing a number of pattern images may have dots of different sizes; Figs. 3-4, 6(A)-6(B), Paragraph 0005, 0016, 0021, 0027, 0066-0069, 0100, 0101; the background image is generated having a size smaller than the document image; Paragraph 0160);*

Wherein the additional information which is different from any of the latent-image area, the background area and the area-assignment information can be extracted (*See Paragraph 0076 and 0082-0083 wherein PDL data determines how the latent image is superimposed with the background area and the code array data and pattern number array data determine the positions and directions of the pattern images superimposed together according to the predetermined rules. See Paragraph 0111 wherein the additional information such as the copy inhibition codes are expressed as plural kinds of pattern images are read/detected/extracted with the image reading process; moreover, in Paragraph 0116-0118 and 0129-0131 the copy inhibiting information can be extracted according to the dots or the binary data 0 and 1; see also Paragraph 0162-0163 and 0122-0123; see Paragraph 0117-0118 for the extraction of the additional information such as the copy inhibition information and condition information. See Paragraph 0089 wherein the size of the unit two-dimensional array of the condition code array as of the copy inhibition code array is defined by 20 vertical by 20 horizontal*) by determining

Art Unit: 2628

directions (e.g., Paragraph 0082, the cited reference discloses plural kinds of code data such as two dimensionally arrayed in an area of predetermined size to generate a unit two-dimensional array for the copy inhibition code arrays and the unit two-dimensional arrays are repeatedly arrayed in both the vertical and horizontal directions) to which positions of the arranged dots are away from the predetermined positions (e.g., Paragraph 0088).

Matsunoshita clearly teaches that the additional information such as the embedded code information with the contents of the condition information and the copy inhibition code are reconstructed as a background image wherein the background image includes a latent image. Moreover, the background image including the additional information is also attached to the document image in compositing; see Paragraph 0016, 0021, 0027, 0051, 0054, 0066, 0072, 0081, 0083, 0088, 0093, 0099-**0106**, 0109, 0117, 0124-0127, 0132-0133, 0145-0147, 0155-0165, 0198-0204, 0209-0211; See paragraph 0066-0069; Matsunoshita teaches additional information being attached to the latent image area. For example, Matsunoshita discloses in Figs. 5(A)-6(C) the latent image area and the additional information such as the copy inhibition information (Paragraph 0062) is attached to the latent image area wherein the relatively small dots within the latent image characters cannot be faithfully copied by the copying machine (Paragraph 0101) and the large dots outside the latent image are faithfully reproduced. The copy as shown in Figs. 6(B) and 6(C) is legible with characters "COPY". Therefore, the copy inhibition information is attached to the latent image area to distinguish an original image from a copy. In the images in Figs. 6(B) and 6(C), "COPY" can be seen by the human eye.

In other words, Matsunoshita clearly shows that additional information is ALSO attached to the latent image area. For example, Matsunoshita discloses in Figs. 5(A)-6(C) the latent image area and the additional information such as the copy inhibition information (Paragraph 0062) is attached to the latent image area wherein the relatively small dots within the latent image characters cannot be faithfully copied by the copying machine in which the character image is snow white not containing characters and graphics (Paragraph 0101) and the large dots outside the latent image are faithfully reproduced. See paragraph 0110 that the characters embedded as a latent image comes forth into view when the document image is copied. See also Paragraph 0160 that the background image is located in a predetermined location of the document image.

The attached information is capable of distinguishing the original document from a copy. The cited reference teaches the composite image having the embedded information is an ORIGINAL image as distinct from the copied one after it is subject to the copying operation. This allows the copy of the original document to be distinguished from the original document. The user is also capable of printing out the original document without attaching the additional information, i.e., the background image to the original document when the user is permitted to print the original document. Moreover, Matsunoshita discloses the copying of the original document is either allowed or prohibited, and if allowed, a copy inhibition mark is attached with the original document in the latent image area together with the background image. See Paragraph 0193-0194 wherein the document data may be printed without the pattern images or without the copy inhibition information. In Paragraph 0200, the copy inhibition code is used to permit **the copying of the printed document** wherein the printed document serves as “an

Art Unit: 2628

original document". Paragraph 0210-0211 illustrate that the document is printed as a copy with the pattern images shown.

Matsunoshita discloses in Paragraph 0110 that this psychological deterrent acts on the illicit copying act and one can **distinguish between the original and the copied sheet by the emerging image**. *Therefore, Matsunoshita clearly discloses the additional information is capable of distinguishing an original image from a copy as the additional information is attached to the latent image area to distinguish an original image from a copy.* In the image of Fig. 6(B), the copied image is clearly different from the original image-the confidential document.

However, Matsunoshita is silent to the claim limitation wherein the additional information can be extracted based on the difference between the positions of the arranged dots and predetermined positions.

Shimada teaches the claim limitation the claim limitation wherein the additional information can be extracted based on the difference between the positions of the arranged dots and predetermined positions (*See Shimada Paragraph 0101, 0110, 0166*).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have incorporated Shimada's teaching into Matsunoshita because the printed matter of Matsunoshita can be irradiated with UV rays of Shimada so that the latent image can be visually recognized/extracted. Moreover, Shimada discloses the claim limitation generating means for generating a pattern image by arranging dots of a first dot size in the background area that is defined by the area-assignment information, and based on the additional information, arranging dots of a second dot size that is a smaller dot size than the first dot size in the latent-

Art Unit: 2628

image area that is defined by the area-assignment information (*See Shimada Figs. 1, 4, 7 and 11*).

Matshunoshita at least teaches or suggests the claim limitation of extracting the additional information. See Matshunoshita at Paragraph 0111 wherein the additional information such as the copy inhibition codes are expressed as plural kinds of pattern images are read/detected/**extracted with the image reading process**. Moreover, in Matshunoshita Paragraph 0116-0118 and Matshunoshita Paragraph 0129-0131, the copy inhibiting information can be extracted according to the dots or the binary data 0 and 1. See also Matshunoshita at Paragraph 0162-0163 and 0122-0123; at Paragraph 0117-0118 for the extraction of the additional information such as the copy inhibition information and condition information. See Matshunoshita at Paragraph 0089 wherein the size of the unit two-dimensional array of the condition code array as of the copy inhibition code array is defined by 20 vertical by 20 horizontal.

One of the ordinary skill in that art would have been motivated to have extracted the additional information including the latent-image area according to the arrangement of the dots in the latent image area as the dots of the patent image area is different from the dots in the peripheral area according to Shimada (*Shimada Figs. 1, 4, 7 and 11*) that can be visually recognized with the device of Shimada (*Shimada Paragraph 0101, 0110, 0166*).

Re Claims 55 and 64:

Matsunoshita further discloses the claim limitation wherein the additional information can be extracted based on the difference between the positions of the arranged dots and

Art Unit: 2628

predetermined positions in the vertical axis and the difference between the positions of the arranged dots and the predetermined positions in the horizontal axis (See Matsunoshita Figs. 5(A)-6(F) has taught the horizontal and vertical positions and the arranged dots relative to the predetermined positions 0 in the vertical axis and predetermined positions 0 in the horizontal axis. See Paragraph 0089-00910 and 0095 wherein the coordinate positions are determined).

Re Claims 56 and 65:

Matsunoshita and Shimada further disclose the claim limitation wherein the additional information can be extracted based on whether the result of multiplication of the difference between the positions of the arranged dots and predetermined positions in the vertical axis and the difference between the positions of the arranged dots and the predetermined positions in the horizontal axis is negative or positive (See Matsunoshita Figs. 5(A)-6(F) has taught the horizontal and vertical positions and the arranged dots relative to the predetermined positions 0 in the vertical axis and predetermined positions 0 in the horizontal axis. See Paragraph 0089-00910, 0095-0098 and 0128 wherein the predetermined positions are determined for the pattern image with the predetermined rules for generating the pattern number array and the additional information is extracted based on the pattern number array according to Shimada).

Claims 67-70:

Matsunoshita further discloses the claim limitation wherein the positions of the arranged dots correspond to the predetermined positions one to one (See Figs. 5(A)-(C)) and wherein the length between each of positions of the arranged dots and each of the predetermined positions is less than half of the length between two of the predetermined positions (Figs. 5(A)-5(F)).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

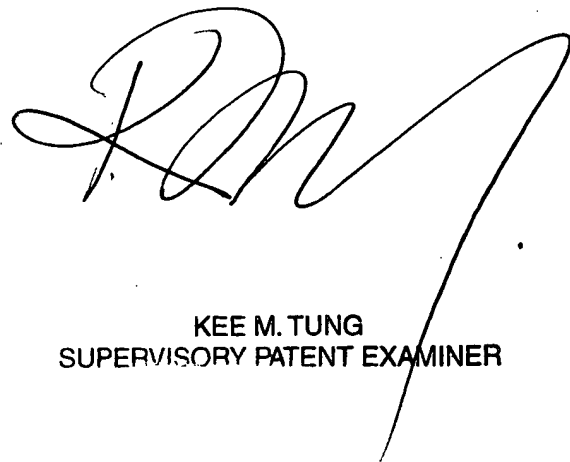
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2628

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jcw

A handwritten signature in black ink, appearing to read 'K. M. TUNG', with a long, sweeping horizontal stroke extending to the right.

KEE M. TUNG
SUPERVISORY PATENT EXAMINER